

CALIFORNIA DIVISION OF MINES AND GEOLOGY

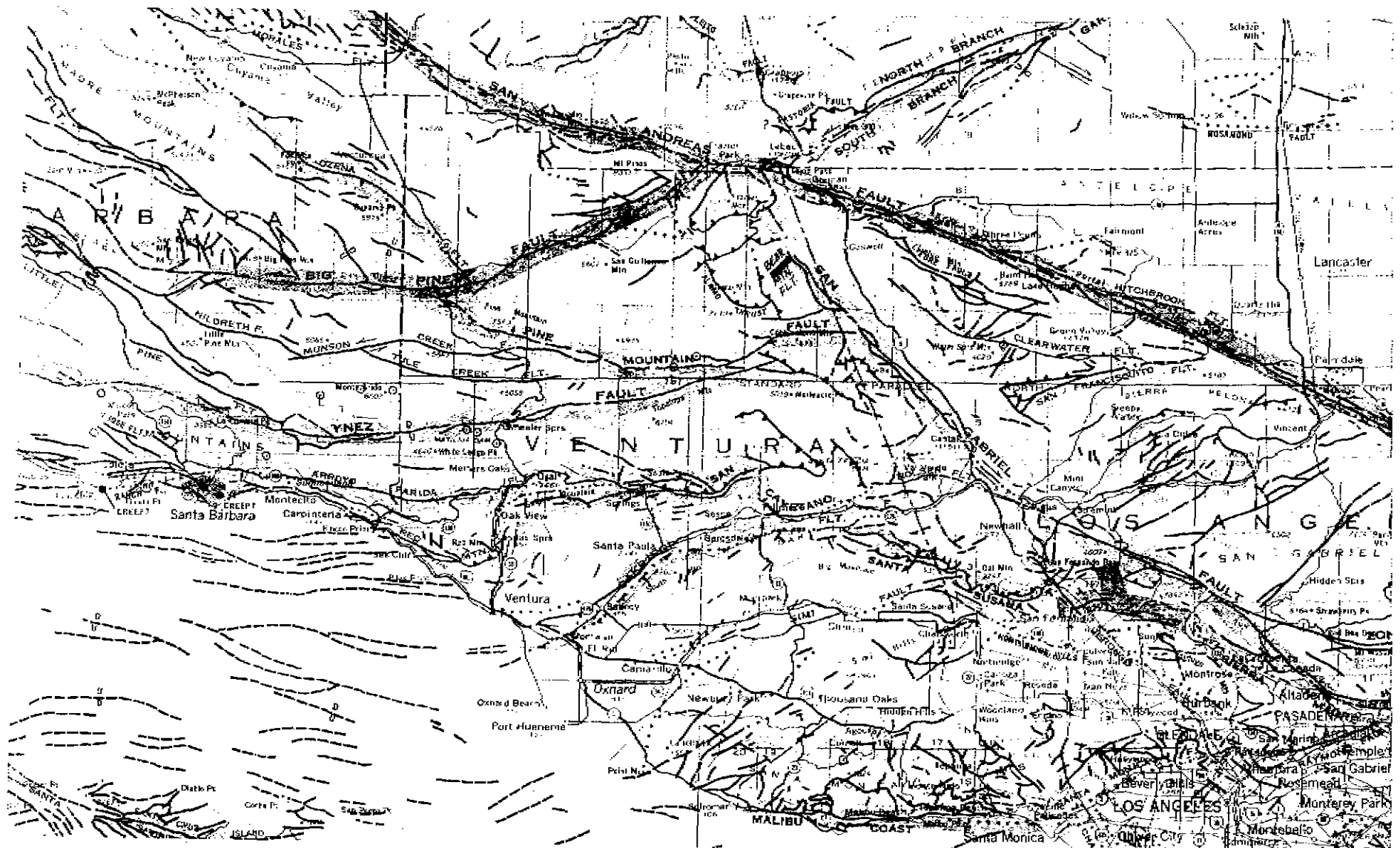
Fault Evaluation Report FER-61

June 20, 1977

1. Name of fault: Bear Mountain fault.
2. Location of fault: McDonald Peak 7.5 minute quadrangle, Ventura County (see figure 1).
3. Reason for evaluation: Part of a 10-year program.
4. List of references:
 - a) Crowell, J.C., 1950, Geology of Hungry Valley area, southern California: Bulletin of the American Association of Petroleum Geologists, v. 34, no. 8, p. 1623-1646 (1:24,000 scale map in Jennings' files).
 - b) Jennings, C.W., 1975, Fault map of California with locations of volcanoes, thermal springs and thermal wells: California Division of Mines and Geology, California Geologic Data Map Series, Map no. 1, scale 1:750,000.
5. Summary of available data:

The Bear Mountain fault is in a rather remote area of Ventura County. Only one original source discusses the Bear Mountain fault. Crowell (1950, p. 1644) mapped the fault as a south dipping, normal fault along which the Hungry Valley Formation (middle to late Pliocene) has been downdropped 1800'. It is because of the displacement of late Pliocene beds that Crowell *concluded* that the Bear Mountain fault is a Pleistocene fault. Jennings (1975) agrees that the fault has moved during the Quaternary.

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 FIGURE 1. General location of the Bear
 Mountain fault (Jennings, 1975, scale 1:750,000).



It is interesting to note that most of the faults in the Transverse Ranges, especially those that are suspected to be recently active, are either strike-slip or reverse faults. Normal faults are generally mapped as secondary faults in the upper plate of a thrust. Since the area is believed to be under the influence of compressive forces at the present, it is unlikely that one would expect movement along a normal fault such as the Bear Mountain fault. That is not to say it is impossible, only unlikely.

6. Interpretation of air photos: Not attempted.

7. Field observations: Not attempted.


8. Conclusions:

The Bear Mountain fault may have been active during the Quaternary, although one can only state that the fault has moved during ^{or since} the late Cenozoic, with any certainty. It would appear that the forces which caused displacement to occur ^a along the fault no longer exist. Indeed, were displacement to occur ^{on the Bear Mountain fault}, one would expect the sense of movement to reverse itself. No evidence is available that would indicate late Quaternary or Holocene movement has occurred along the Bear Mountain fault, although it may have.

9. Recommendations:

Based on the information summarized herein, and the present project guidelines, zoning of the Bear Mountain fault is not recommended at this time. No further work on the part of project staff appears justified at this time.

10. Investigating geologist's name; date:


THEODORE C. SMITH
Assistant Geologist
June 20, 1977

Agree with
recommendations,
ELH
6/22/77